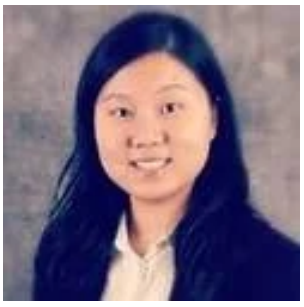

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43
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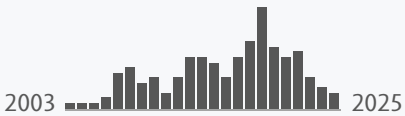


Research activity per year

Overview Fingerprint Network **Scholarly Works** (164) Press/Media (8)

Similar Profiles (6)

Research output

Research output per year

149
Article

13
Conference contribution

1
Conference article

1
Review article

1 - 50 out of 164 results | Publication Year, Title (descending) ›

2025

Anisotropic Third-Harmonic Vortex Beam Generation with Ultrathin Germanium Arsenide Fork Gratings

Deka, J., Gao, J. & Yang, X., Apr 2025, In: Laser and Photonics Reviews. 19, 7

Research output: Contribution to journal › Article › peer-review

Harmonics | Optical Vortex | Germanium | Vortex | Fork-Shaped Grating

Chiral molecular sensing based on spatially selective coupling between achiral metasurface and chiral molecules

Han, B., Yang, X. & Gao, J., Mar 1 2025, In: Journal of Optics (United Kingdom). 27, 3, 035101.

Research output: Contribution to journal › Article › peer-review

Enantiomer | Chirality | Alanine | Clinical Analysis | Food Analysis

Circular dichroism in achiral metasurfaces induced by spatially selective coupling with molecules

Han, B., Yang, X. & Gao, J., Jan 15 2025, In: Optics Letters. 50, 2, p. 399-402 4 p.

Research output: Contribution to journal › Article › peer-review

Metasurface | Chirality | Emission Control | Liquid Crystal Polymer | Resonator

2024

Biaxial Strain Tuned Upconversion Photoluminescence Of Monolayer WS2

Roy, S., Yang, X. & Gao, J., Dec 1 2024, In: Scientific Reports. 14, 1, p. 3860 3860.

Research output: Contribution to journal › Article › peer-review

Open Access

Monolayers | Photoluminescence | WS 2 | Semiconductor Material | Tungsten

Infrared phase-change chiral metasurfaces with tunable circular dichroism

Tang, H., Stan, L., Czaplewski, D. A., Yang, X. & Gao, J., May 20 2024, In: Optics Express. 32, 11, p. 20136-20145 10 p.

Research output: Contribution to journal › Article › peer-review

Open Access

Resonator | Optical Device | Phase Change Material | Absorption Spectra | Encrypted Communication

Uncovering upconversion photoluminescence in layered PbI_2 above room temperature

Ambardar, S., Yang, X. & Gao, J., Dec 2024, In: Scientific Reports. 14, 1, 26900.

Research output: Contribution to journal › Article › peer-review

Open Access

Photoluminescence | Photon Upconversion | Layered Semiconductor | Tunable Photonics | Semiconductor Material

Upconversion Photoluminescence Of Monolayer WSe2 With Biaxial Strain Tuning

Roy, S., Gao, J. & Yang, X., Jan 29 2024, In: Optics Express. 32, 3, p. 3308-3315 8 p.

Research output: Contribution to journal › Article › peer-review

Open Access File

Monolayer WS2 Strain Tuning Upconversion Photoluminescence Monolayers Photoluminescence

2023

Chiral Metasurfaces Of Wavy Rectangle Resonators With Tunable Circular Dichroism

Zeng, X., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., Sep 1 2023, In: Optik. 286, 171024.

Research output: Contribution to journal › Article › peer-review

Resonator Molecule Detection Thermal Emission Control Protein Molecules Geometric Symmetry

Effect of Solvent on Convectively Driven Silica Particle Assembly: Decoupling Surface Tension, Viscosity, and Evaporation Rate

Roach, L., Gonzalez-Rodriguez, D., Gao, J., Laurichesse, E., Castro-Grijalba, A., Oda, R., Schmitt, V., Pouget, E., Tréguer-Delapierre, M. & Drisko, G. L., Mar 28 2023, In: Langmuir. 39, 12, p. 4216-4223 8 p.

Research output: Contribution to journal › Article › peer-review

Open Access

Particle Assembly Decoupling Surface Surfactant Film Co-Solvent System

High-temperature Phonon-assisted Upconversion Photoluminescence Of Monolayer WSe2

Meng, F., Yang, X. & Gao, J., Jul 3 2023, In: Applied Physics Letters. 123, 1, 013502.

Research output: Contribution to journal › Article › peer-review

Open Access File

Monolayers | Photoluminescence | Phonon Population | Anti-Stokes | Infrared Light Detection

Phonon-assisted upconversion photoluminescence of monolayer MoS_2 at elevated temperatures

Meng, F., Yang, X. & Gao, J., Aug 14 2023, In: Optics Express. 31, 17, p. 28437-28443 7 p.
Research output: Contribution to journal › Article › peer-review

Open Access

Monolayers | Photoluminescence | Monolayer MoS2 | Transition Metal Dichalcogenide | Exciton Coupling

Structural Design of Intelligent Reversible Two-Way Structural Color Films

Huang, N. N., Gao, J., Sheng, S. Z., Shang, Q. G., Xian, Z. Y., Wang, J. L. & Liu, J. W., Aug 23 2023, In: Nano Letters. 23, 16, p. 7389-7396 8 p.
Research output: Contribution to journal › Article › peer-review

Polystyrene | Finite Element Analysis | Photonic Crystal | Colored Film | Film

Wavelength-tunable Infrared Chiral Metasurfaces With Phase-change Materials

Tang, H., Stan, L., Czaplewski, D. A., Yang, X. & Gao, J., Jun 19 2023, In: Optics Express. 31, 13, p. 21118-21127 10 p.
Research output: Contribution to journal › Article › peer-review

Phase Change Material | Liquid Crystal Polymer | Resonator | Permittivity | Optical Device

2022

Anisotropic Third-Harmonic Generation of Exfoliated As_2S_3 Thin Flakes

Tripathi, R. P. N., Yang, X. & Gao, J., Jun 20 2022, In: Optics Express. 30, 13, p. 22661-22670 10 p.

Research output: Contribution to journal › Article › peer-review

Open Access File

Electronic Circuit | Optical Property | Optical Device | Arsenic | Layered Material

Chiral Generation of Hot Carriers for Polarization-Sensitive Plasmonic Photocatalysis

Negrin-Montecelo, Y., Movsesyan, A., Gao, J., Burger, S., Wang, Z. M., Nlate, S., Pouget, E., Oda, R., Comesana-Hermo, M., Govorov, A. O. & Correa-Duarte, M. A., Feb 2 2022, In: Journal of the American Chemical Society. 144, 4, p. 1663-1671 9 p.

Research output: Contribution to journal › Article › peer-review

Open Access

8

Plasmonic Photocatalysis | Hot Carriers | Hot Carrier | Electromagnetic Excitation | Plasmonic Components

Design of photonic nanostructures via chirality induction

Gao, J., Wu, W., Lemaire, V., Carvalho, A., Nlate, S., Buffeteau, T., Oda, R., Battie, Y., Pauly, M. & Pouget, E., 2022, In: International Conference on Metamaterials, Photonic Crystals and Plasmonics. p. 491-492 2 p.

Research output: Contribution to journal › Conference article › peer-review

Chirality | Surface (Surface Science) | Nanostructured Material | Nanostructure | Gold Nanoparticles

Dual-Band Selective Circular Dichroism in Mid-Infrared Chiral Metasurfaces

Tang, H., Rosenmann, D., CZAPLEWSKI, D. A., Yang, X. & Gao, J., May 23 2022, In: Optics Express. 30, 11, p. 20063-20075 13 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Band-Selective | Surface (Surface Science) | Wavelength Band | Rectangular Bar | Metamaterial

Large in-plane vibrational and optical anisotropy in natural 2D heterostructure abramovite

Dasgupta, A., Belakovskiy, D. I., Chaplygin, I. V., Gao, J. & Yang, X., Dec 2022, In: Scientific Reports. 12, 1, 16803.
Research output: Contribution to journal › Article › peer-review

Open Access

Heterojunction | Optical Anisotropy | Two-Dimensional Material | Anisotropy | Integrated Photonic Devices

Mid-Infrared Chiral Metasurface Absorbers with Split-Ellipse Structures

Zeng, X., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., Dec 15 2022, In: Optics Communications. 525, 128854.
Research output: Contribution to journal › Article › peer-review

Thermal Analysis | Thermophotovoltaics | Chiral Materials

Misfit-generated structural and optical anisotropies of the natural MoS2-PbS van der Waals heterostructure merelaniite

Bindi, L., Dasgupta, A., Mukherjee, P., Gao, J., Yang, X. & Jaszczak, J. A., Nov 2022, In: Physical Review Materials. 6, 11, 115202.
Research output: Contribution to journal › Article › peer-review

Open Access

Anisotropy | Heterojunction | Optical Anisotropy | Single Crystal | Solar Cell

Natural 2D Layered Mineral Cannizzarite with Anisotropic Optical Responses

Dasgupta, A., Yang, X. & Gao, J., Dec 1 2022, In: Scientific Reports. 12, 1, 10006.

Research output: Contribution to journal › Article › peer-review

Open Access File

2D Material | Heterojunction | Two-Dimensional Material | Cannizzarite | Anisotropy

Natural Layered Mercury Antimony Sulfosalt Livingstonite with Anisotropic Optical Properties

TRIPATHI, R. P. N., Gao, J. & Yang, X., May 23 2022, In: Optics Express. 30, 11, p. 19611-19628 18 p.

Research output: Contribution to journal › Article › peer-review

Open Access File

Sulfosalt Group | Harmonic Generation | Optical Property | Van Der Waals Heterostructures | Heterojunction

Polarization-Sensitive Optical Responses from Natural Layered Hydrated Sodium Sulfosalt Gerstleyite

Tripathi, R. P. N., Yang, X. & Gao, J., Mar 10 2022, In: Scientific Reports. 12, 1, 4242.

Research output: Contribution to journal › Article › peer-review

Open Access File

Harmonic Generation | Layered Material | Sodium | Harmonics | Engineering

Unveiling room temperature upconversion photoluminescence in monolayer WSe_2

Mushtaq, A., Yang, X. & Gao, J., Dec 5 2022, In: Optics Express. 30, 25, p. 45212-45220 9 p.

Research output: Contribution to journal › Article › peer-review

Open Access

Monolayers | Photoluminescence | Transition Metal Dichalcogenide | Semiconductor Laser | Night Vision

2021

2D Layered SiP as Anisotropic Nonlinear Optical Material

Sar, H., Gao, J. & Yang, X., Dec 1 2021, In: Scientific Reports. 11, 1, 6372.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Silicon | Optical Material | Nonlinear Optical Materials | Anisotropy | Optical Property

Anisotropic Optical Responses of Layered Thallium Arsenic Sulfosalt Gillulyite

Tripathi, R. P. N., Gao, J. & Yang, X., Dec 1 2021, In: Scientific Reports. 11, 1, 22002.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Thallium | Arsenic | Two-Dimensional Material | Optical Property | Chemical Property

Layered Mantle Heterogeneities Associated with Post-Subducted Slab Segments

Yu, Y., Xu, Z., Gao, S. S., Liu, K. H. & Gao, J., Oct 1 2021, In: Earth and Planetary Science Letters. 571

Research output: Contribution to journal › Article › peer-review

Mantle Heterogeneity | Proto-South China Sea | Western Pacific Ocean | Post-Orogenic Magmatism

Southern South China Sea

Naturally Occurring 2D Heterostructure Nagyágite with Anisotropic Optical Properties

Dasgupta, A., Gao, J. & Yang, X., Dec 8 2021, In: Advanced Materials Interfaces. 8, 23, 2101106.

Research output: Contribution to journal › Article › peer-review

Anisotropy | Heterojunctions | Van Der Waals Heterostructures | Optical Property | Anisotropic Optical Properties

Naturally Occurring Layered Mineral Franckeite with Anisotropic Raman Scattering and Third-Harmonic Generation Responses

Tripathi, R. P. N., Gao, J. & Yang, X., Dec 1 2021, In: Scientific Reports. 11, 1, 8510.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Raman Spectra | Harmonics | Van Der Waals Heterostructures | Franckeite | Heterojunction

Naturally Occurring Van Der Waals Heterostructure Lengenbachite with Strong In-Plane Structural and Optical Anisotropy

Dasgupta, A., Yang, X. & Gao, J., Nov 29 2021, In: npj 2D Materials and Applications. 5, 1, 88.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Anisotropy | Van Der Waals Heterostructures | Heterojunction | Optical Anisotropy | 2D Material

Natural Van Der Waals Heterostructure Cylindrite with Highly Anisotropic Optical Responses

Dasgupta, A., Gao, J. & Yang, X., Dec 1 2021, In: npj 2D Materials and Applications. 5, 1, 74.

Research output: Contribution to journal › Article › peer-review

Open Access File

Van Der Waals Heterostructures | Cylindrite | Heterojunction | Two Dimensional Materials | Superlattice

Polarization-Dependent Optical Responses in Natural 2D Layered Mineral Teallite

Tripathi, R. P. N., Yang, X. & Gao, J., Dec 1 2021, In: Scientific Reports. 11, 1, 21895.

Research output: Contribution to journal › Article › peer-review

Open Access File

Optical Response | Polarization-Independent | Layered Minerals | Layered Materials | Layered Material

Van Der Waals Layered Mineral Getchellite with Anisotropic Linear and Nonlinear Optical Responses

Tripathi, R. P. N., Yang, X. & Gao, J., Dec 1 2021, In: Laser and Photonics Reviews. 15, 12, 2100182.

Research output: Contribution to journal › Article › peer-review

Physical Property | Optical Property | Thermoelectrics | Optical Device | Layered Material

2020

Anisotropic Third-Harmonic Generation in Layered Germanium Selenide

Dasgupta, A., Gao, J. & Yang, X., May 20 2020, In: Laser and Photonics Reviews. 14, 6, 1900416.
Research output: Contribution to journal › Article › peer-review

Germanium Selenide | Germanium | Black Phosphorus | Optical Property | Crystal Structure

Broadband and Chiral Infrared Plasmonic Metasurface Absorbers

Yang, X. & Gao, J., Jan 1 2020, In: Annual Review of Heat Transfer. 23
Research output: Contribution to journal › Article › peer-review

Plasmonics | Metasurface | Tungsten | Resonator | Thermal Analysis

Broadband Infrared Circular Dichroism in Chiral Metasurface Absorbers

Ouyang, L., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., May 1 2020, In: Nanotechnology. 31, 29, 295203.
Research output: Contribution to journal › Article › peer-review

Liquid Crystal Polymer | Resonator | Chirality | Natural Material | Thermophotovoltaics

Chiral Plasmonic Metasurface Absorbers in the Mid-Infrared Wavelength Range

Mahmud, M. S., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., Oct 1 2020, In: Optics Letters. 45, 19, p. 5372-5375 4 p.
Research output: Contribution to journal › Article › peer-review

2

Thermal Analysis | Metamaterial | Molecular Detection | Molecular Vibration | Unit Cell Structure

Creating Regular Matrices of Aligned Silica Nanohelices: Theory and Realization

Gao, J., Semlali, S., Hunel, J., Montero, D., Battie, Y., Gonzalez-Rodriguez, D., Oda, R., Drisko, G. L. & Pouget, E., Jan 28 2020, In:

Chemistry of Materials. 32, 2, p. 821-829 9 p.
Research output: Contribution to journal › Article › peer-review

Open Access

Regular Matrix | Helix Orientation | Stick-Slip Phenomenon | Nanosensor | Regular Spacing

Crustal Modifications Beneath the Central Sunda Plate Associated with the Indo-Australian Subduction and the Evolution of the South China Sea

Gao, J., Yu, Y., Song, W., Gao, S. S. & Liu, K. H., Sep 1 2020, In: Physics of the Earth and Planetary Interiors. 306
Research output: Contribution to journal › Article › peer-review

Sunda Plate | Borneo | Proto-South China Sea | Malay Peninsula | Sibumasu Terrane

Determination of Effective Parameters of Fishnet Metamaterials with Vortex based Interferometry

Cao, W., Gao, J. & Yang, X., Jul 6 2020, In: Optics Express. 28, 14, p. 20051-20061 11 p.
Research output: Contribution to journal › Article › peer-review

Open Access File

Fishnet Metamaterial | Interferometry | Vortex | Metamaterial | Negative Refractive Index

In-Plane Anisotropic Third-Harmonic Generation from Germanium Arsenide Thin Flakes

Sar, H., Gao, J. & Yang, X., Dec 1 2020, In: Scientific Reports. 10, 1, 14282.
Research output: Contribution to journal › Article › peer-review

Open Access File

Germanium | Germanium Arsenide | Optical Property | Electronic Property | Superconductivity

Micrometer-Accuracy 2D Displacement Interferometer with Plasmonic Metasurface Resonators

Guo, C., Zhang, Y., Klegseth, M., Gao, J. & Chen, G., Dec 1 2020, In: Chinese Optics Letters. 45, 23, p. 6474-6477 4 p.

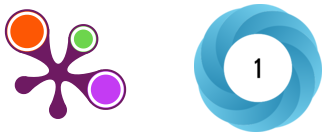
Research output: Contribution to journal › Article › peer-review

Resonator | Plasmonics | Metasurface | Displacement Interferometer | Micrometer Accuracy

Nonlinear Beam Shaping with Binary Phase Modulation on Patterned WS_2 Monolayer

Dasgupta, A., Yang, X. & Gao, J., Sep 16 2020, In: ACS Photonics. 7, 9, p. 2506-2514 9 p.

Research output: Contribution to journal › Article › peer-review



Nonlinear Polarization | Binary Phase Modulation | Beam Shaping | Transition Metal Dichalcogenide | Monolayers

Plasmon-Phonon Coupling between Mid-Infrared Chiral Metasurfaces and Molecular Vibrations

Mahmud, M. S., Rosenmann, D., Czaplewski, D. A., Gao, J. & Yang, X., Jul 6 2020, In: Optics Express. 28, 14, p. 21192-21201 10 p.

Research output: Contribution to journal › Article › peer-review

Open Access | File

Phonon | Metasurface | Plasmon | Plasmon-Phonon Coupling | Metamaterial

Tuning the Chiroptical Properties of Elongated Nano-objects via Hierarchical Organization

Gao, J., Wu, W., Lemaire, V., Carvalho, A., Nlate, S., Buffeteau, T., Oda, R., Battie, Y., Pauly, M. & Pouget, E., Apr 28 2020, In: ACS nano. 14, 4, p. 4111-4121 11 p.

Research output: Contribution to journal › Article › peer-review

Open Access

- Plasmonic Nanoparticles
- Chiroptical Properties
- Hierarchical Organization
- Mueller Matrix Polarimetry
- Nanophotonic Materials

2019

3D Janus Plasmonic Helical Nanoapertures for Polarization-Encrypted Data Storage

Chen, Y., Yang, X. & Gao, J., Dec 1 2019, In: Light: Science and Applications. 8, 1, 45.

Research output: Contribution to journal › Article › peer-review

Open Access File

- Plasmonics
- Nanoaperture
- Janus
- Encrypted Data
- Enantiomer

A Method for Arranging a Network of Surface Boreholes for Abandoned Gob Methane Extraction

Qin, W., Xu, J., Hu, G., Gao, J. & Xu, G., Nov 1 2019, In: Energy Exploration and Exploitation. 37

Research output: Contribution to journal › Article › peer-review

- Abandoned Mine Methane
- Surface Borehole
- Methane Extraction
- Borehole
- Methane

Atomically Thin Nonlinear Transition Metal Dichalcogenide Holograms

Dasgupta, A., Gao, J. & Yang, X., Sep 1 2019, In: Nano Letters. 19, 9, p. 6511-6516 6 p.
Research output: Contribution to journal › Article › peer-review

Transition Metal Dichalcogenide | Holography | Transition Metal Dichalcogenides | Holographic Image | Nonlinear Holography

Broadband Infrared Binary-Pattern Metasurface Absorbers with Micro-Genetic Algorithm Optimization

Li, Z., Stan, L., Czaplewski, D. A., Yang, X. & Gao, J., Jan 1 2019, In: Optics Letters. 44, 1, p. 114-117 4 p.
Research output: Contribution to journal › Article › peer-review

Metasurface Absorber | Micro-Genetic Algorithm | Binary Pattern | Genetic Algorithm | Metasurface

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